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# WERNER'S <br> NOMENCLATURE OF COLOURS, 

WITH ADDITIONS,
ARRANGED SO AS TO RENDER IT HIGHLY USEFUL
TO THE
ARTS AND SCIENCES,
PARTICULARLY
Zoology, Botany, Chemistry, Mineralogy, and Morbid Anatomy.
ANNEXED TO WHICH ARE
EXAMPLES SELECTED FROM WELL-KNOWN OBJECTS
in THE
ANIMAL, VEGETABLE, AND MINERAL KINGDOMS.

BY
PATRICK SYME, FLOWER-PAINTER, EDINBURGH; PAINTER TO THE WERNERIAN AND CALEDONIAN HORTICULTURAL SOCIETIES.

SECOND EDITION.

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## WERNER'S

NOMENCLATURE OF. COLOURS.

A nomenclature of colours, with proo per coloured examples of the different tints, as a general standard to refer to in the description of any object, has been long wanted in arts and sciences. It is singular, that a thing so obviously useful, and in the description of objects of natural history and the arts, where co-
lour is an object indispensably necessary, should have been so long overlooked. In describing any object, to specify its colours is always useful ; but where colour forms a character, it becomes absolutely necessary. How defective, therefore, must description be when the terms used are ambiguous; and where there is no regular standard to refer to. Description without figure is generally difficult to be comprehended; description and figure are in many instances still defective; but description, figure, and colour combined form the most perfect representation, and are next to seeing the object itself. An object may be described of such a colour
by one person, and perhaps mistaken by another for quite a different tint : as we know the names of colours are frequently misapplied; and often one name indiscriminately given to many colours. To remove the present confusion in the names of colours, and establish a standard that may be useful in general science, particularly those branches, viz. Zoology, Botany, Mineralogy, Chemistry, and Morbid Anatomy, is the object of the present attempt.

The author, from his experience and long practice in painting objects which required the most accurate eye to distin-
guish colours, hopes that he will not be thought altogether unqualified for such an undertaking. He does not pretend indeed that it is his own idea; for, so far as he knows, Werner is entitled to the honour of having suggested it. This great mineralogist, aware of the importance of colours, found it necessary to establish a Nomenclature of his own in his description of minerals, and it is astonishing how correct his eye has been; for the author of the present undertaking went over Werner's suites of colours, being assisted by Professor Jameson, who was so good as arrange specimens of the suites of minerals mentioned by Werner,
as examples of his Nomenclature of Colours. He copied the colours of these minerals, and found the component parts of each tint, as mentioned by Werner, uncommonly correct. Werner's suites of colours extend to seventy-nine tints. Though these may answer for the description of most minerals, they would be found defective when applied to general science: the number therefore is extended to one hundred and ten, comprehending the most common colours or tints that appear in nature. These may be called standard colours; and if the terms pale, deep, dark, bright, and dull, be applied to any of the standard colours,
suppose crimson, or the same colour tinged lightly with other colours, suppose grey, or black, or brown, and applied in this manner :
1st.
2 d.

3d.
4th.

5th.
6th.


$\underset{\text { Crimson }}{\text { Dull }}\}^{\text {tinged with Grey. }}$| Black. |
| :--- |
| Brown, \&c. |

If all the standard colours are applied in this manner, or reversed, as grey tinged with crimson, \&c. the tints may be mul-

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tiplied to upwards of thirty thousand, and yet vary very little from the standard colours with which they are combined. The suites of colours are accompanied with examples in, or references to, the Animal, Vegetable, and Mineral Kingdoms, as far as the author has been able to fill them up, annexed to each tint, so as to render the whole as complete as possible. Werner, in his suites of colours, has left out the terms Purple and Orange, and given them under those of Blue and Yellow ; but, with deference to Werner's opinion, they certainly are as much entitled to the name of colours as green, grey, brown, or any other com-
position colour whatever, and in this work Orange and Purple are named, and arranged in distinct places. To accomplish which, it was necessary to change the places of two or three of Werner's colours, and alter the names of a few more ; but, to avoid any mistake, the letter W. is placed opposite to all Werner's colours. Those colours in Werner's suites, whose places or names are changed, are also explained, by placing Werner's term opposite to the name given, which was found more appropriate to the component parts of the changed colours. Those who have paid any attention to colours, must be aware that it is very
difficult to give colours for every object that appears in nature ; the tints are so various, and the shades so gradual, they would extend to many thousands: it would be impossible to give such a number, in any work on colours, without great expence ; but those who study the colours given, will, by following Werner's plan, improve their general knowledge of colours ; and the eye, by prac. tice, will become so correct, that by examining the component parts of the colour of any object, though differing in shade or tint from any of the colours given in this series, they will see that it partakes of, or passes into, some one of
them. It is of great importance to be able to judge of the intermediate shades or tints between colours, and find out their component parts, as it enables us correctly to describe the colour of any object whatever.

Werner's plan for describing the tints, or shades between colours, is as follows : " When one colour approaches slightly to another, it is said to incline towards it ; when it stands in the middle between two colours, it is said to be intermediate; when, on the contrary, it evidently approaches very near to one of the colours, it is said to fall, or pass, into it." In this

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work the metallic colours are left out, because, were they given, they would soon tarnish; and they are in some measure unnecessary, as every person is well acquainted with the colour of gold, silver, brass, copper, \&c. Also the play and changeability of colour is left out, as it is impossible to represent them; however, they are well known to be combinations of colours, varying as the object is changed in position, as in the pigeon's neck, peacock's tail, opal, pearl, and other objects of a similar appearance. To gain a thorough knowledge of colours, it is of the utmost consequence to be able to distinguish their component parts. Werner
has described the combinations in his suites of colours, which are very correct ; these are given, and the same plan followed, in describing those colours which are added in this series. The method of distinguishing colours, their shades, or varieties, is thus described by Werner : " Suppose we have a variety of colour, which we wish to refer to its characteristic colour, and also to the variety under which it should be arranged, we first compare it with the principal colours, to discover to which of them it belongs, which, in this instance, we find to be green. The next step is to discover to which of the varieties of green in the sys-
tem it can be referred. If, on comparing it with emerald green, it appears to the eye to be mixed with another colour, we must, on comparison, endeavour to discover what this colour is: if it prove to be greyish white, we immediately refer it to apple green ; if, in place of greyish white, it is intermixed with lemon yellow, we must consider it grass green; but if it contains neither greyish white nor lemon yellow, but a considerable portion of black, it forms blackish green. Thus, by mere ocular inspection, any person accustomed to discriminate colours correctly, can ascertain and analyse the different varieties that occur in the Ani-
mal, Vegetable, and Mineral Kingdoms. In an undertaking of this kind, the greatest accuracy being absolutely necessary, neither time nor pains have been spared to render it as perfect as possible ; and it being also of the first importance, that the colours should neither change nor fade, from long practice and many experiments, the author has ascertained that his method of mixing and laying on colours will ensure their remaining constant, unless they are long exposed to the sun, which affects, in some degree, all material colours; he has therefore arranged Werner's suites of colours, with his own additions, into a book, and in

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that form presents it to men of science, trusting, that by removing the present ambiguity in the names of colours, this Nomenclature will be found a most use. ful acquisition to the arts and sciences.

Since the former edition of this Work was published, Professor Jameson, in his " Treatise on the External Characters of Minerals," makes the following observations.
" Many attempts have been made to delineate the different colours that occur in the Mineral Kingdom, with the view of enabling those who do not possess a mineralogical collection, or who may not be familiar
with colours, to know the different varieties mentioned in the descriptions of mineralogists. Wiedemann, Estner, Ludwig, and several others, have published tables of this kind; but all of them were deficient, not only in accuracy, but also in durability. Having the good fortune to possess a Colour-Suite of Minerals, made under the eye of Werner, by my late friend H. Meuder of Freyberg, and being desirous of making this collection as generally useful as possible, I mentioned my wish to Mr Syme, painter to the Wernerian and Horticultural Societies, who readily undertook to make a delineation of all the varieties in the collection. This he executed with his usual skill and accuracy; adding, at the same time, to the series several other colours, which he has distinguished by appropriate names, and arranged along with those in the Wernerian System. The whole have been published in a series of tables, in a treatise which ought to be in the hands of every mineralogist, and indeed in the possession of naturalists of every description.
" The older and some of the modern mineralogists, in their descriptions of the species of minerals, use only single varieties of colour. It was Werner who first made the remark, that single varieties are not
characteristic, and that it is only by using the whole range or suite of the mineral, that we are enabled to employ this character with advantage. Thus, it is not sufficient to say that epidote is green, that beryl is green, or that topaz is yellow; we must mention every variety of colour which these minerals possess, because each species of mineral is expressed by a particular suite or group of colours.
"Although colours are frequently applied by botanists for distinguishing species of plants, particularly in the class cryptogamia, still they in general hesitate in employing them in the discrimination of plants in the higher divisions of the system. It is alleged that the colours of plants change very readily, particularly when cultivated in our gardens, and that, therefore, so variable a character should not be attended to. It is not denied, that the colours of plants frequently undergo very considerable changes when cultivated in our gardens; but these domesticated plants are no longer the natural unaltered species, and therefore are not objects of the attention of the systematic botanist. It is also known, that plants, even in their natural situations, owing to disease, experience great changes in their colours; but these
diseased individuals would surely never be taken by the botanist for characteristic examples of the species. Indeed it is highly probable, that every species of plant, in its natural region, has a determined colour, or suite of colours. Hence colours may be used as a most interesting character, particularly in those systems of botany which are termed Natural.
" This character may also be advantageously used in giving correct ideas of the changes of colour which plants experience by cultivation, or when removed from their natural soil and climate. Interesting coloured maps might be constructed, to shew the general changes in the colour of the vegetable world from the equator towards the poles ; and the difference of colours in vegetables in the two hemispheres, and in the Old and New World.
" In the Animal Kingdom, the number of colours is very great. They often form the most striking feature in the external appearance of the species; and hence have been considered by systematics as affording discriminating characters of much value. The agriculturist, engaged in the breeding of animals, often witnesses striking changes in their colours, and these varieties of colour, either alone, or
conjoined with other characters, characterize his different breeds. But here, as in botany, a regular systematic Nomenclature of Colour is much wanted.
"The anatomist will find it much to his advantage, to use in his descriptions some regular and fixed standard of colours ; and in Morbid Anatomy, in particular, the importance of such an aid will be immediately perceived: Thus, the various changes in the animal system, from the slightest degree of inflammation to complete gangrene, are strikingly marked by the different colours the parts assume. Accurate enumerations of these colours as they occur in single varieties, or in groups, conjoined with descriptions of the changes in form, transparency, lustre, consistency, hardness, structure, and weight, observable in the diseased parts, will convey an accurate conception of the diseased parts to those who have not an opportunity of seeing it. But to effect this, the anatomist and surgeon must agree on some fixed nomenclature, not only of colour, but also of form, transparency, lustre, consistency, hardness, and structure; and a better model cannot be pointed out than that contrived by Werner, for the description and discrimination of minerals.
" Lastly, the chemist will have daily opportunities of experiencing its utility ; and the meteorologist, and the hydrographer, by the use of an accurate and standard table of colours, will be enabled, in a much more satisfactory manner than heretofore, to describe the skies and meteors of different countries, and the numerous varieties of colour that occur in the waters of the ocean, of lakes and rivers."

## WHITES.

| N: | Naines. | Colours. | Animat. | Vegetable. | Mineral. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Snow White |  | Breast of the black headed Gull. | Snow-Drop. | Carrara Marbile and cale Sinter. |
| 2 | Reddish White. |  | Eqg of Grey Lurnet. | Back of the Cheristmas Rose. | Porcctain Earth. |
| 3 | Raryush White. |  | Tunction of the Neck and Back of the Tittin ake Gull. | White Geranuun <br> or <br> storks Bill. | Arragonite |
| 1 | Kiflowish IWhitc. |  | Pigret. | Mawthorn Blossom. | Challe and Tripoli. |
| 5 | Orange colonired White. |  | Breast of While or Screech owl. | Targe Wild Convolvulus. | French Porcclain Clay. |
| 6 | Gremish White. |  | $\therefore$ Vent Coverts of Golden crasted Wren. | Polyanithues Warcissus. | Calc Sinter: |
| 7 | Skinimed milkWhite |  | White of the Miuman Eyeballs: | Back of the Petals <br> of Blue Itepatica. | Common opal. |
| 8 | Greyish mite. |  | Inside Quill-feathers of the Kittivatie. | White Hamburgh Grapes. | Gramular <br> Iimestone. |

## COMPONENT PARTS

OF

## THE COLOURS

GIVEN IN

## THIS SERIES.

## WHITES.

No. 1. Snow White, is the characteristic colour of the whites; it is the purest white colour; being free of all intermixture, it resémbles new-fallen snow. W.
2. Reddish White, is composed of snow white, with a very minute portion of crimson red and ash grey. W.
3. Purplish White, is snow white, with the slightest tinge of crimson red and Berlin blue, and a very minute portion of ash grey.

No. 4. Yellowish White, is composed of snow white, with a very little lemon yellow and ash grey. W.
5. Orange-coloured White, is snow white, with a very small portion of tile red and king's yellow, and a minute portion of ash grey.
6. Greenish White, is snow white, mixed with a very little emerald green and ash grey. W.
7. Skimmed-milk White, is snow white, mixed with a little Berlin blue and ash grey. W.
8. Greyish White, is snow white, mixed with a little ash grey. W.
?

## GREYS.

| No. | Names . | Colours. | Animal. | Vegetable. | Mineral. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 9 | A.s\% Grey. |  | Breast of Tong triled Hen Titmouse. | Fresh Wood ashes | Flint. |
| 10 | Smoke Grey. |  | Breast of the Robin roumd the Red. |  | Flint. |
| 11. | Frenc: Girely. |  | Brenst of Pied Wag tail. |  |  |
| 12 | Pearl Gresy. |  | Backs of black headed and Kittrivake Gulls. | Back of Petrals of rurple llepatica. | Porcelian Tasper. |
| 13 | Tellowish Girey |  | Font coverts of White Rurnip. | Sternes of the Barberry. | Common <br> Calcedour. |
| 14 | Bluish Girey. |  | Back, and tail Coverts Wood Pigeon |  | Limestome |
| 15 | Grecmish Grey. |  | Unill iculliers of the Robin. | Bark of Ash Tree. | Clay, slate. wacke. |
| 16 | Blackish Grey. |  | Back of Nue-hatch. | old Stems of Hawthorn. | Pliml. |

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## GREYS.

No. 9. Ash Grey, is the characteristic colour of Werner's greys; he gives no description of its component parts; it is composed of snow white, with portions of smoke and French grey, and a very little yellowish grey and carmine red. W.
10. Smoke Grey, is ash grey mixed with a little brown. W.
11. French Grey, nearly the steel grey of Werner, without the lustre, is greyish white, with a slight tinge of black and carmine red.
12. Pearl Grey, is ash grey mixed with a little crimson red and blue, or bluish grey with a little red. W.

No. 13. Yellowish Grey, is ash grey mixed with lemon yellow and a minute portion of brown. W.
14. Bluish Grey, is ash grey mixed with a little blue. W.
15. Greenish Grey, is ash grey mixed with a little emerald green, a small portion of black, and a little lemon yellow. W.
16. Blackish Grey, blackish lead grey of Werner without the lustre, is ash grey, with a little blue and a portion of black.


## BJACKS

| No | Names | Colours | ANTMAL | VEGETABLE | MINERAL |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 17 | Grayish Black |  | Tritor Ousel. <br> Breast and rupor Part of <br> Back of Water Hen. |  | Basalt. |
| 18 | Buniste <br> Black |  | Tarigest Black Shug | Crowberry: | Black Cobalt ochre. |
| 19 | Greemish Black |  | Breast of Lapwing |  | Hornblénde |
| 20 | Pivch or Broimish Black |  | cuillemot Wing Coverts or Black Cock. |  | Yenite <br> Mica |
| 21 | Reditish <br> Black |  | Spots on Larigs Hings of Ty qer Moth: <br> Breast of Pochard Duck. | Berry of Fiucturia Caccinca | Otiven Ore |
| 22 | Trik <br> Black |  |  | Bervy of Deadly <br> Nighe Shade | Oixiven are |
| 23 | Velvet Black |  | Mole. <br> Taul Feathers of Black Cock. | Black of Red and Black WestTrativa Peas. | Obsidian |

## BLACKS.

No. 1\%. Greyish Black, is composed of velvet black, with a portion of ash grey. W
18. Bluish Black, is velvet black, mixed with a little blue and blackish grey. W.
k , is velvet black, mixed jrown, yellow, and green.
)wnish Black, is velvet with a little brown and
, is velvet black, mixed little carmine red, and a of chesnut brown.
elvet black, with a little n it.




## BLACKS.

No. 17. Greyish Black, is composed of velvet black, with a portion of ash grey. W
18. Bluish Black, is velvet black, mixed with a little blue and blackish grey. W.
19. Greenish Black, is velvet black, mixed with a little brown, yellow, and green. W.
20. Pitch, or Brownish Black, is velvet black, mixed with a little brown and yellow. W.
21. Reddish Black, is velvet black, mixed with a very little carmine red, and a small portion of chesnut brown.
22. Ink Black, is velvet black, with a little indigo blue in it.

## 30

No. 23. Velvet Black, is the characteristic colour of the blacks; it is the colour of black velvet. W.
?

BLUES


## 31

BLUES.
No. 24. Scotch Blue, is Berlin blue, mixed with a considerable portion of velvet black, a very little grey, and a slight tinge of carmine red. W.
25. Prussian Blue, is Berlin blue, with a considerable portion of velvet black, and a small quantity of indigo blue.
26. Indigo Blue, is composed of Berlin blue, a little black, and a small portion of apple green.

2\%. China Blue, is azure blue, with a little Prussian blue in it.
28. Azure Blue, is Berlin blue, mixed with a little carmine red : it is a burning colour, W.

No. 29. Ultramarine Blue, is a mixture of equal parts of Berlin and azure blue.
30. Flax-Flower Blue, is Berlin blue, with a slight tinge of ultramarine blue.
31. Berlin Blue, is the pure, or characteristic colour of Werner. W.
32. Verditter Blue, is Berlin blue, with a small portion of verdigris green.
33. Greenish Blue, the sky blue of Werner, is composed of Berlin blue, white, and a little emerald green. W.
4. Greyish Blue, the smalt blue of Werner, is composed of Berlin blue, with white, a small quantity of grey, and a hardly perceptible portion of red. W.

PURPLES.

| No. | Names | Colours | Antamat | Vegitamite | Micarizat. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 35 | Blurish <br> Zitac <br> Purple |  | Mate of the Tebe Mula Depressa. | Bhue Tilac. | Tepridolite. |
| 36 | B7uisht <br> Burple |  | Papritio Argeotus. Arare Binue Butterfy. | $\begin{aligned} & \text { Parts af White } \\ & \text { Purpinde Grocus. } \end{aligned}$ |  |
| :37 | Tiolet <br> Purple. |  |  | Turpule Aister | Ameflus.s. |
|  |  |  | ? |  |  |
| 38 | Pans:" <br> Puapile |  | Chaysomela Goettingensis. | Sweet-scented Violet. | Derloys.sitire Spar: |
| 39 |  |  |  | Cantrobury Bell. Campamila Persicifolia. | Flum.Spar. |
| 40 | Trmperiat Prarple. |  |  | Deep Piorts at Flower at Satyon Crocus | Fluor Spar. |
| 41 | Auricula Purple. |  | Eigg of largestikue bottle. or Flesh Fly. | Targestiurple Auricula. | Fhuor Spars |
| 42 | Plarm <br> Iurple. |  |  | 177m. | Fluar spart |
| 43 | $\begin{aligned} & \text { Ried } \\ & \text { Tilac } \\ & \text { Zurpole. } \end{aligned}$ |  | Light Spots af the uipper IIrig.s of PeacockButtertly. | Fiedtilac. Pate Furple Promose. | Tepridotite. |
| 4.4 | Lavender. Purple. |  | TightParts cf Spots or the zimuer llings ofPeacock Bittertly | Driedliavender FRenrevs. | Pmreelain /nsperer: |
| 45 | $\begin{aligned} & \text { Pute } \\ & \text { Binackissh } \\ & \text { Zurple. } \end{aligned}$ |  |  |  | Porcelain Jaspa: |

## PURPLES.

No. 35. Bluish Lilac Purple, is bluish purple and white.
36. Bluish Purple, is composed of about equal parts of Berlin blue and carmine red.
$3 \%$ Violet Purple, violet blue of Werner, is Berlin blue mixed with red, and a little brown. W.
38. Pansy Purple, is indigo blue, with carmine red, and a slight tinge of raven black.
39. Campanula Purple, is ultramarine blue and carmine red, about equal parts of each : it is the characteristic colour.

No. 40. Imperial Purple, is azure and indigo blue, with carmine red, about equal parts of each.
41. Auricula Purple, is plum purple, with indigo blue and much carmine red.
42. Plum Purple, the plum blue of Werner, is composed of Berlin blue, with much carmine red, a very little brown, and an almost imperceptible portion of black. W.
43. Red Lilac Purple, is campanula purple, with a considerable portion of snow white, and a very little carmine red.
44. Lavender Purple, the lavender blue of Werner, is composed of blue, red, and a little brown and grey. W.
45. Pale Bluish Purple, is lavender purple mixed with a little red and black.


GHFFNS.

| $N$. | Names | Colours | Animat | Vegetabie | moverat |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 46 | Celomdine firem. |  | Piatrena. <br> Margaritaria . | Back of Thusslage Tieaves. | Fieryl. |
| 47 | Mown -tain. Givern |  | Ihatona <br> Tiridarin. | Thicteleaved Gudveed. Silver-Zeaved Almond. | Actignolite Beryl. |
| 48 | Theele Green. |  |  | SenTale. <br> Leares of Tieetas in Wirter. | Actynotile Trase. |
| 49 | Bhaclish Green. |  | Eilytra of licloe Tiolaceus. | TharteStreake on <br> Treaves of Cayenne Zepper. | Serpentine. |
| 50 | Verdigris <br> Gireen. |  | Tal of small Tiong -tailed Green Parrot. |  | Capper <br> Green. |
| 51 | Filuish Green. |  | Eyg of Thrush. | Thidertriste of WhatioseTienves | Diery\% |
| 58 | Apple <br> firepn. |  | Trider Side of Wings Grectlírom Moth. |  | Crysoprase |
| 53 | Fimerald <br> Gireen. |  | Beraity Spatmillivg of Teal Trake. |  | Timerald. |

GREENS.


## 35

## GREENS:

No. 46. Celindine Green, is composed of verdigris green and ash grey. W.
47. Mountain Green, is composed of emerald green, with much blue and a little yellowish grey. W.
48. Leek Green, is composed of emerald green, with a little brown and bluish grey. W.
49. Blackish Green, is grass green mixed with a considerable portion of black. W.
$a$, is composed of emerald green, much Berlin blue, and a little white. W.




## 35

## GREENS:

No. 46. Celindine Green, is composed of verdigris green and ash grey. W.
47. Mountain Green, is composed of emerald green, with much blue and a little yellowish grey. W.
48. Leek Green, is composed of emerald green, with a little brown and bluish grey. W.
49. Blackish Green, is grass green mixed with a considerable portion of black. W.
50. Verdigris Green, is composed of emerald green, much Berlin blue, and a little white. W.

No. 51. Bluish Green, is composed of Berlin blue, and a little lemon yellow and greyish white.
52. Apple Green, is emerald green mixed with a little greyish white. W.
53. Emerald Green, is the characteristic colour of Werner; he gives no description of the component parts of any of the characteristic colours; it is composed of about equal parts of Berlin blue and gamboge yellow.
54. Grass Green, is emerald green mixed with a little lemor yellow. W.
55. Duck Green, W. a new colour of Werner's, added since the publication of his nomenclature; it is composed of emerald green, with a little indigo

## 37

blue, much gamboge yellow, and a very little carmine red.

No. 56. Sap Green, is emerald green, with much saffron yellow, and a little chesnut brown.

5\%. Pistachio Green, is emerald green mixed with a little lemon yellow, and a small quantity of brown. W.
58. Asparagus Green, is pistachio green, mixed with much greyish white. W.
59. Olive Green, is grass green mixed with much brown. W.
60. Oil Green, is emerald green mixed with lemon yellow, chesnut brown, and yellowish grey. W.
61. Siskin Green, is emerald green mixed with much lemon yellow, and a little yellowish white. W.

## YELLOWS.

No. 62. Sulphur Yellow, is lemon yellow mixed with emerald green and white. W.
63. Primrose Yellow, is gamboge yellow mixed with a little sulphur yellow, and much snow white.
64. Wax Yellow, is composed of lemon yellow, reddish brown, and a little ash grey. W.
65. Lemon Yellow, the characteristic colour of the yellow series of Werner, the colour of ripe lemons; W. it is found to be a mixture of gamboge yellow and a little ash grey : being a mixed colour, it cannot be adopted as the characteristic colour ; the characteristic colours of the blues, reds,

YEMROWS.

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## STMTHWS.

| A? | Names | Colours | Antamti. | Vegtrable. | Minerat. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 69 | riathstime. Y̌llow. |  | fiallstomes. | IFariquold Apple. |  |
| 70 | Honey Tellow. |  | TourerParts of Teck of Bird of Rarudise. |  | Fhor Spar: |
| 71 | stran Fellonv. |  | Polar Bear. | Oat Straz. | Scherlile. calamine. |
| 72 | Tïue Tellor |  | Bidy of Silk Moth. | White currants. | Saxon <br> Topaz. |
| 7: | $\begin{aligned} & \text { simma } \\ & \text { Tellow. } \end{aligned}$ |  | TentPats of Tail of Bird of Paradise. | Stamina of Honey-suckle | Pate Bracilian Topax. |
| 74 | $\begin{aligned} & \text { Qidire } \\ & \text { Tellont. } \end{aligned}$ |  | Fent Coverts of Red Sturt. |  | Porcelain Tasper. |
| 75 | Cream <br> Fellow. |  | Breast of Tealdrate. |  | Zorvectain .Tasper. |

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YELTOWS.





TEIIIOWS.

| No. | Names | Colours | ANIMAL | VEGETABLE | minerar. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 62 | Sulphuar Yellow. |  | Yellow Parts of large Dration filu. | Various Coloured Snap dragon. | Sutphuer |
| 63 | Primrose Yellow. |  | Pale Cann\%y Bird. | Wild Prinnose | Paic coloured Suliphur. |
| 6.4 | $\begin{aligned} & \text { Wax } \\ & \text { Yellow. } \end{aligned}$ |  | Liuriva or Larde Tíater Braile. |  | Seme opaz. |
| 65 | Tiemun líllow. |  | lavite livas, arm llawnet | Sheritum" Goicínlocias | $\begin{aligned} & \text { Yatom } \\ & \text { M, Mine } \end{aligned}$ |
| 66 | Gomberre Belicos. |  | Weners of tioldrincti CematialBiod. | Tellow irsmemine. | IIc, <br> -!'mi"e. <br> s.'plun. |
| 67 |  Yecious. |  | Head of Gielden Phetsitunt. | Sillow, 'uitip <br>  |  |
| 68 | Siuttion Pillow. |  | Tial Coverts of Goldern Thorrermet. | Inthoerer inf Sertipon finemes |  |

and yellows ought to be pure and free from all intermixture with any other colour ; gamboge, as the purest yellow colour, is adopted instead of lemon yellow, as the characteristic colour of the yellows.

No. 66. Gamboge Yellow, is the characteristic colour.

6\%. King's Yellow, is gamboge yellow, with a small portion of saffron yellow.
68. Saffron Yellow, is gamboge yellow, with gallstone yellow, about equal parts of each.
69. Gallstone Yellow, is gamboge yellow, with a small quantity of Dutch orange, and a minute proportion of honey yellow.

No. ${ }^{7} 0$. Honey Yellow, is sulphur yellow mixed with chesnut brown. W.
71. Straw Yellow, is sulphur yellow mixed with much greyish white and a little ochre yellow. W.
72. Wine Yellow, is sulphur yellow mixed with reddish brown and grey, with much snow white. W.
173. Sienna Yellow, is primrose yellow, with a little ochre yellow.
74. Ochre Yellow, is sienna yellow, with a little light chesnut brown. W.
75. Cream Yellow, is ochre yellow mixed with a little white, and a very small quantity of Dutch orange. W.


ORANGH.

| 10 | Names | Colours. | Angmat. | Vegtiabie. | Minetial. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 76 | Jutche Orarige. |  | (irest of Golden crester Tiren. | Common seedpod of sprinalle-tree. | Streak of Red Orpiment. |
| 77 | Buff <br> Oranige |  | Streak from the liye of the Timen Fishuer. | Stantina of the Targe Tlinte Cistus. | Nratrolite. |
| 78 | Orpimat Arange. |  | The Teck Ruff of the Golden Pheasint. Belly of the Wasty Tewt. | Trutianfess. |  |
| 79 | Brownish stange. |  | Tyes of Hle Zargest Fleshthly. | Sty. 7 o of the Orarige Lily. | Dar\% Bracilian Topuズ. |
| 80 | Redilish matuge. |  | Tower Ming.s <br> Tyger Mathe. | Hemitueria. MuffHitiscus. |  |
| 81. | Deep Redraisle Cramure. |  | Gold Fish hustie absiracted. | Scarlet herulingtore trpole. |  |
|  |  |  |  |  |  |

## 41

## ORANGE.

No. 76. Dutch Orange, the orange yellow of Werner, is gamboge yellow, with carmine red. W.

7\%. Buff Orange, is sienna yellow, with a little Dutch Orange.
78. Orpiment Orange, the characteristic colour, is about equal parts of gamboge yellow and arterial blood red.
79. Brownish Orange, is orpiment orange, with a little hyacinth red, and a small quantity of light chesnut brown.
80. Reddish Orange, is buff orange mixed with a considerable portion of tile red.
81. Deep Reddish Orange, is Dutch orange mixed with much scarlet red.

## REDS.

No. 82. Tile Red, is hyacinth red mixed with much greyish white, and a small portion of scarlet red. W.
83. Hyacinth Red, is scarlet, red, with lemon yellow and a minute proportion of brown.
84. Scarlet Red, is arterial blood red, with a little gamboge yellow.
85. Vermilion Red, is scarlet red, with a minute portion of brownish red.
86. Aurora Red, is tile red, with a little arterial blood red, and a slight tinge of carmine red. W.
87. Arterial Blood Red, is the characteristic colour of the red series.

RED.

| No: | Names. | Colours. | Antmal. | Vegetable. | Minerat. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 82 | Tile Red. |  | Breast of the Cock Bullfinctu. | Shrubby Pimpernel. | Porcetain Jasper. |
| 83 | Myacinth Red. |  | Red Spots of the Lygaus ApterusFly. | Red on the golden Rennette Apple. | 1hyacinth. |
| 84 | Scarlet Red. |  | Scarlet This or Curlew, Mark on Head of Red Grouse. | $\begin{aligned} & \text { Large red Oriental } \\ & \text { Poppy Red Parts } \\ & \text { opril and black } \\ & \text { Indian Peas. } \end{aligned}$ | light red Cinnaber. |
| 85 | Virmillion Red. |  | Red Coral. | Love Apple. | Cinnaber. |
| 86 | Aurora <br> Red. |  | Vend converts of Pied Wood-Pecker. | Red on the Naked Apple. | Rect Otpiment. |
| 87 | Arterial BloodRed. |  | Head of the Cock Gold-fïnch. | Corn Poppy, Cherry. |  |
| 88 | Flesh Ked. |  | Ituman Skin. | Larksper. | Heavy Spar, Limestone. |
| 89 | Rowe Red |  |  | Common Garden Rose. | Figure Stome. |
| 90 | Pack Blossom Red. |  |  | Peach Blossom. | Red Cobalt Ore. |

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RED.

| N: | Names . | Colours. | Antmat. | Vegetable. | Minerat |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 91 | Carinine Red. |  |  | Raspberry, Cocles Comb Carnation Pink. | Oriental Ruby. |
| 92 | tiake Red. |  |  | Red Tulip, Rose Officimalus. | Spinrl. |
| 93 | Crimuson Red. |  |  |  | Precious. Giarnet. |
| 94 | Purplish Red. |  | Outside of Quills of ferico. | Darl Gimson officinal. Garden Rose. | Precionis Giarnet. |
| 95 | Coclinual Red. |  |  | Thader Dhis\% of decayed Leaves of: None-so-pretty. | 7ar\% Cimnatier |
| 96 | Veinemis Blawd Red. |  | Veinous Blood. | Musk Flower, or dart: Purple Scatious. | Plyrope. |
| 97 | Brownish Rurple Red:. |  |  | Flower of deadly Mightshade. | Red Antimomy ore. |
| 98 | Chocolate Red. |  | Breast of Bird of Paradise. | Tiruwn Dish: of common Marigold. |  |
| 99 | Brownist Red. |  | Mark on Throat of Red-throated Diver. |  | Fron Flint. |

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No. 88. Flesh Red, is rose red mixed with tile red and a little white. W.
89. Rose Red, is carmine red, with a great quantity of snow white, and a very small portion of cochineal red. W.
90. Peach Blossom Red, is lake red mixed with much white. W.
91. Carmine Red, the characteristic colour of Werner, is lake red, with a little arterial blood red. W.
92. Lake Red, the crimson red of Werner, is arterial blood red, with a portion of Berlin blue. W ,
93. Crimson Red, is carmine red, with a little indigo blue. W

No. 94. Purplish Red, the columbine red of Werner, is carmine red, with a little Berlin blue, and a small portion of indigo blue. W.
95. Cochineal Red, is lake red mixed with bluish grey. W.
96. Veinous Blood Red, is carmine red mixed with brownish black. W.
97. Brownish Purple Red, the cherry red of Werner, is lake red mixed with brownish black, and a small portion of grey. W.
98. Chocolate Red, is veinous blood red mixed with a little brownish red.
99. Brownish Red, is chocolate red mixed with hyacinth red, and a little chesnut brown. W.

BROWNS.

| No | Names. | Colours | Animat. | Vegeetsble. | Mineral. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 100 |  |  | Heail or Pochard Wing coverts of Sheldrake. | Ficmale Spike of Catstail Reed. |  |
| ' 101 | Dhep Reddish Brown |  | Breast of Pochard, and Necte of Teal Diatore. | Dead Leaves of green Panic Girass. | Brown <br> Blenule. |
| 102 | Tinber <br> Brown. * |  | Moor Buzzard. | Disk of Rulueckia. |  |
| 103 | Chesrout Brown. |  | Neck and Breast of Red Grouse. | Chesmuts. | Egyptian Jasper. |
| 104 | Tellowish Brown. |  | light Brown Spots on Guinea-Pig. Breast of Hoopoe. |  | Fron Flint, and common Jasper. |
| 105 | Wood Brown |  | Common Weasel. Light parts of Feathers on the Back of the Snipe. | Hazel Nuts. | Mountain Wood. |
| 106 | Liver Brown. |  | Middle Parts of Feathers of Hen Pheasant and Hing coverts of Grosbeak. |  | Semi opal. |
| 107 | Inair <br> Bromiz |  | Head of Rintal Druck |  | Trood Tin. |
| 108 | Briciceli Brown: |  | Head of Black headed Gull. | . | Zircon. |
| 109 | Clove Brown. |  | Head and Neck of Male Kestril. | Stans of Black Gurrant Buish. | Axinite, Rock Cristal. |
| 110 | Blackish <br> Bronin: |  | Stormy Petrit. Thing Covertw of black Cock: Forehead of Foumart . |  | Mineral Pitch. |

## 45

BROWNS.
No. 100. Deep Orange-coloured Brown, is chesnut brown, with a little reddish brown, and a small quantity of orange brown.
101. Deep Reddish Brown, is chesnut brown, with a little chocolate red.
102. Umber Brown, is chesnut brown, with a little blackish brown.
103. Chesnut Brown, the characteristic colour of the browns of Werner's series, W. is deep reddish brown and yellowish brown.
104. Yellowish Brown, is chesnut brown mixed with a considerable portion of lemon yellow. W.

## 46

No. 105. Wood Brown, is yellowish brown mixed with ash grey.
106. Liver Brown, is chesnut brown mixed with a little black and olive green.

10\%. Hair Brown, is clove brown mixed with ash grey. W.
108. Broccoli Brown, is clove brown mixed with ash grey, and a small tinge of red. W.
109. Olive Brown, is ash grey mixed with a little blue, red, and chesnut brown. W.
110. Blackish Brown, is composed of chesnut brown and black. W.

## 47

## LIST OF COLOURS

CHANGED FRON WERNER'S ARRANGEMENR.

Werner's Names
Milk White.
Blackish Lead Grey, but without lustre.
Steel Grey, but without lustre.
Smalt Blue.
Sky Blue.
Violet Blue.
Plum Blue.
Lavender Blue.
Orange Yellow.
Crimson Red.
Columbine Red.
Cherry Red.

Changed to
Skimmed Milk White.
Blackish Grey.

French Grey. Greyish Blue.
Greenish Blue.
Violet Purple.
Plum Purple.
Lavender Purple.
Dutch Orange.
Lake Red.
Purplish Red.
Brownish Purple Red.
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